

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of:)	
Establishing the Digital Opportunity Data Collection)	WC Docket No. 19-195
Modernizing the FCC Form 477 Data Program)	WC Docket No. 11-10

COMMENTS
Of the
SMITHVILLE TELEPHONE COMPANY
SMITHVILLE, MISSISSIPPI
September 23, 2019
(Via ECFS)

Smithville Telephone Company ("Smithville"), a provider of wireline telephone services from before 1956 and fixed broadband since 2001, is a certified incumbent local exchange carrier (ILEC) serving rural portions of Itawamba and Monroe Counties in Mississippi. Located near the midpoint of a line from Memphis, Tennessee, to Birmingham, Alabama, the Company's service area includes the Town of Smithville and about 95 square miles of rural area in the two counties. The Company provides broadband and voice telephone services to a few hundred customers using a mix of Active Ethernet fiber and copper technologies. Smithville Telephone is an A-CAM recipient of USF support.

Summary

1. For a typical rural census block, the number of end user service locations do not vary with mapping of broadband availability by census block, with buffered facilities or using individual geocoded service locations.

2. The existence of unserved areas in a census block is immaterial because services are not provided to areas.

3. Buffered facility maps can accurately depict broadband service availability, but data to prepare the maps isn't fully available.

4. The definition of service availability in the Report and Order that only allows for current served locations or locations capable to be served in 10 days is a location based requirement.

Example Census Block

A typical census block, 280959501002025 (Block 2025), from Smithville Telephone's service area is shown below and will be used to clarify comments and responses to some of the Commission's questions about fixed broadband service mapping. This census block is in Monroe County, Mississippi, and is bounded by State Line, Jackson, Pearce Chapel and Stafford Roads. A Google Earth Pro screen capture of Block 2015 is shown in Figure 1. Almost all of the census block is heavily forested and managed for timber harvesting or farming operations.



Figure 1 - Google Earth Pro View

Service Locations

There are 15 service locations, identified by yellow markers, inside Block 2025¹ and more locations across the bounding roads in other blocks as shown in Figure 2. All locations were geolocated when Smithville Telephone adopted A-CAM funding and 10 locations have current broadband only (CBOL) or broadband plus phone service. Five other locations are currently without service, but could be served. Each location has Active Ethernet FTTH service in use or available. Some of the 15 locations are not visible in aerial views like that in Figure 1, and Smithville's experience has been that travel to and inspection of locations is frequently required to obtain correct geocoordinate information, even when persons who are lifetime residents of the area are involved.

¹ This census block was listed with 14 locations or housing units in the A-CAM offer and has an area of 1.35 square miles.

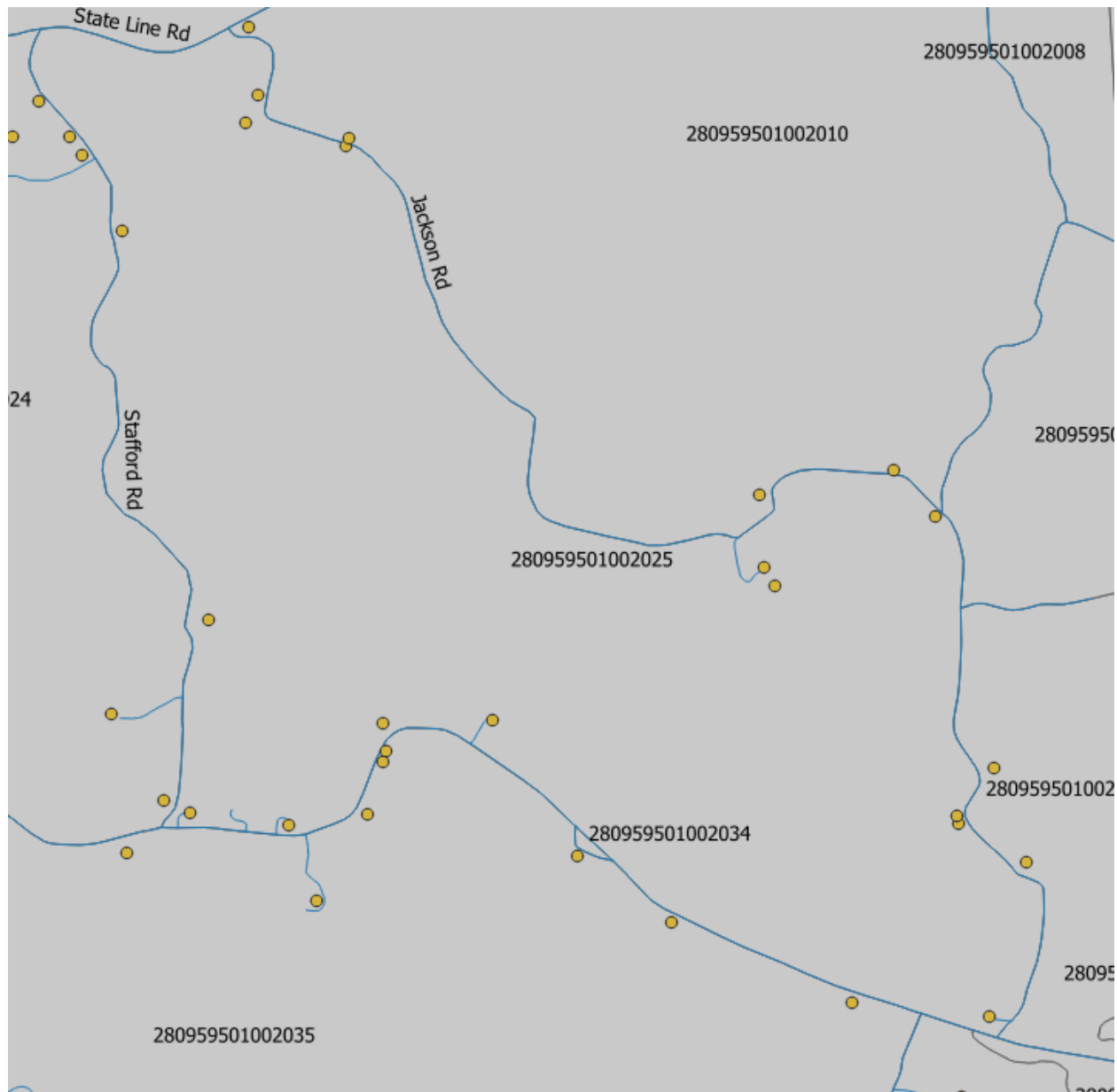


Figure 2 - Census Block 280955901002025 Locations²

² Most of the figures used in these comments are screen captures from QGIS 3.4 a free open source user supported GIS application.

Fiber Network Description

Information about the fiber network serving Block 2025 is shown in Figure 3 below with pedestals, access points to the fiber cables, shown in red. There are two cable routes serving this census block, A Route from the North and B Route from the South. Drops from the pedestals to the served locations are not shown.

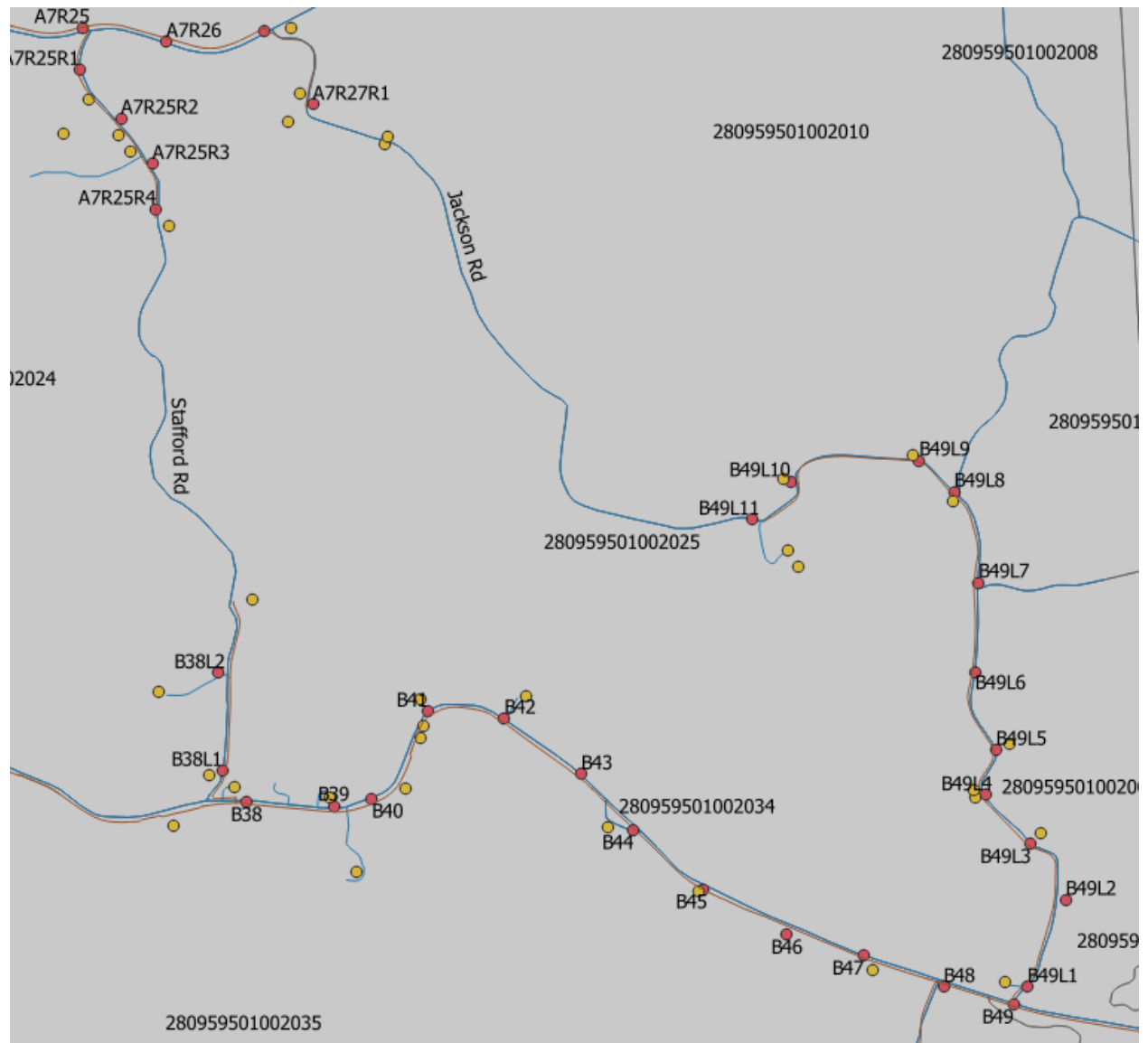


Figure 3 - Census Block 280955901002025 Locations (Yellow), Fiber Cables and Pedestal Locations (Red)

Fixed Facility Buffer Polygons

In the NPRM, the Commission asks about the suitability of representing service areas by creating fixed buffers around network facilities. In the following Figure 4 an example of this technique for Block 2025 is shown for a fixed buffer of about 100 meters. Two of the 15 locations in the census block are outside the 100 meter buffer, but all or maybe all but one would be included in a 200 meter buffer. Including service drops in the buffered representation would capture all the served locations, but some eligible unserved locations without drops might be excluded with a general application of buffering. Smithville's experience has been that a small percentage of locations require drops greater than 2000 feet, so some manual correction to the fixed buffer may be required to capture all locations that should be in a service area representation. A 200 meter buffer would leave most of the area of Block 2025 outside Smithville's service area, but existing locations will be captured in the buffered area.

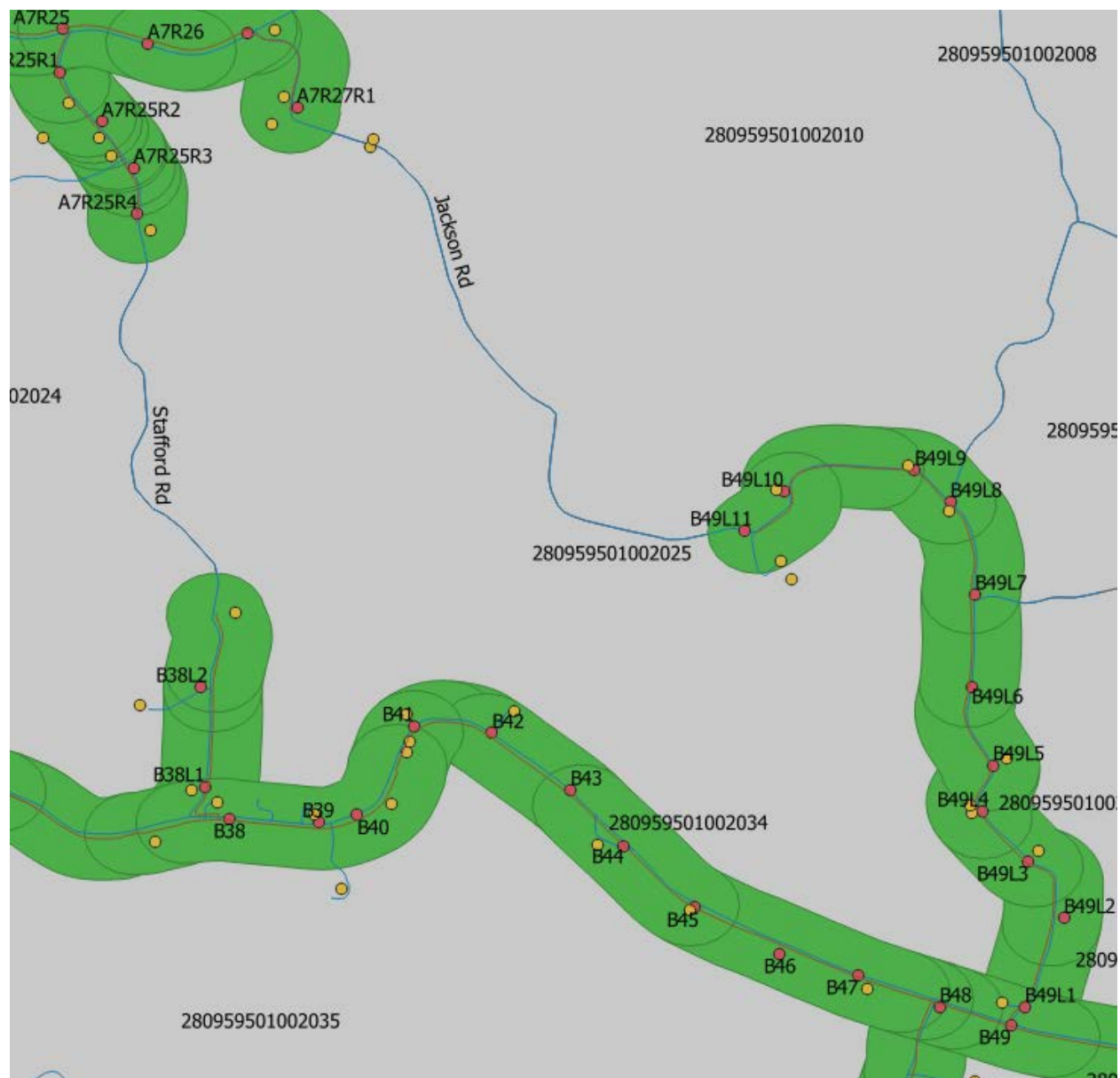


Figure 4 - Census Block 280955901002025 Buffered Cable Routes A and B

Observations

Throughout the document issued in this proceeding there is a mixing of the terms area and location when referring to fixed broadband service availability. Broadband fixed services are never provided to areas. Customers purchasing fixed broadband services almost always receive and use these services within or near some sort of structure (location) at which a provider terminates its network facilities.

A concept exists that service to only a few locations in a census block evidences that block is inadequately served, but in rural areas those few locations may be all that exist. There are sometimes no locations in a rural census block. The more urban census block might contain a semi-homogeneous distribution of locations, but this is almost never so in truly rural areas. Rural census blocks are commonly delineated by roads and people have a bias to living in homes near roads, power, and community water supply lines. Most locations in rural census blocks are along roads.

There are questions posed in the Second Notice about how to improve the granular mapping specified in the Report and Order with a long term goal to include location data. The definition of service availability in the Report and Order that only allows for current served locations or locations capable to be served in 10 days is a location based requirement.

Small Provider Impacts

Smithville Telephone is a small provider with only a few hundred voice and broadband customers and there are several ways this data collection could be designed to limit negative impacts on costs and operations.

There is a data problem. In the NPRM, the Commission addresses the lack of small provider GIS experience. Smithville has used basic GIS applications for various projects, but this is a rare situation as most small providers likely use consultants for this sort of work. There is an overlooked problem, however, related to requiring a GIS service area representation in that geolocated data on cable routes, locations, and pedestals does not exist now, especially for copper plant placed when only paper records were available³. For example, the pedestal locations shown in Figures 3 and 4 were manually collected by two employees as an experiment to estimate the time needed to collect this information for Smithville's entire fiber and copper network. A driver and a person walking to and recording coordinates for pedestals appears to be the most efficient process. It appears two knowledgeable persons could do this data collection for Smithville's network in one or two months of dedicated effort, but this level of effort is impossible because of the impact on normal operations, so a part time effort of many months will likely be needed before all the data required to represent the service area in shapefile format is available.

The maps are too complicated. This effort should only be focused on creation of service area maps with maximum offered speeds for a provider. The value of different maps by speed, with inclusion of latency measurements, or addressing network transport capacity is limited and will slow the availability of services if required. Small providers likely will limit the number of plans available to consumers to avoid the time and expense of providing multiple maps. Innovative services like time of day speed variations, discounting increased speeds for special broadcast programs, or person centered services portability across locations may never be implemented.

³ Non-military use of GPS was not authorized until 1996 and selective availability limited accuracy until 2000.